

CLAIMS

What is claimed is:

1. An interface system suitable for coupling a first bus interface controller with a second bus interface controller, comprising:
- a first bus interface controller; and
 - a second bus interface controller wherein the second bus interface controller is coupled to the first bus interface controller via an interface including
 - a command queuing interface suitable for enqueueing a transaction;
 - a command completion interface suitable for reporting transaction completion; and
 - a data transfer interface suitable for transferring data.
2. The interface system as described in claim 1, wherein command and control information are suitable for being exchanged on at least one of the command queuing interface and command completion interface while data is exchanged on the data transfer interface.
3. The interface system as described in claim 1, wherein data for a transaction is suitable for being moved without respect to a current transaction being requested on a control bus.
4. The interface system as described in claim 1, wherein a backend master device enqueues a transaction on the command queuing interface, at least one transfer of data is accomplished corresponding to the transaction queued on the command queuing interface, and completion status of the transaction is reported on the command completion interface.

1 5. The interface system as described in claim 1, wherein a plurality of transactions
2 are queued, the transaction are completed without regard to an order the
3 transactions are queued.

1 6. The interface system as described in claim 1, wherein the first bus interface
2 controller is suitable for coupling to a backend device and the second bus
3 interface controller is suitable for coupling to an internal bus of an information
4 handling system.

1 7. The interface system as described in claim 1, wherein the first bus interface
2 controller conforms to at least one of a USB standard, SCSI standard, fiber
3 standard and the second bus interface conforms to at least one of a PCI standard
4 and PCI-X standard.

1 8. The interface system as described in claim 1, wherein a plurality of data
2 transfers on the data transfer interface are executed, the plurality of data
3 transfers corresponding to a transaction queued on the command queuing
4 interface.

1 9. A method of transferring data, comprising:
2 enqueueing a transaction on a command queuing interface;
3 transferring data corresponding to the transaction on a data transfer interface;
4 and
5 receiving notification of completion of the transfer of data corresponding to the
6 transaction, the notification reported on a command completion interface.

1 10. The method as described in claim 9, wherein a plurality of transactions are
2 queued, the transaction are completed without regard to an order the
3 transactions are queued.

1 11. The method as described in claim 9, wherein command and control information
2 are suitable for being exchanged on at least one of the command queuing
3 interface and command completion interface while data is exchanged on the data
4 transfer interface.

1 12. The method as described in claim 9, wherein data for a transaction is suitable
2 for being moved without respect to a current transaction being requested on a
3 control bus.

1 13. The method as described in claim 9, wherein a backend master device enqueues
2 a transaction on the command queuing interface, at least one transfer of data is
3 accomplished corresponding to the transaction queued on the command queuing
4 interface, and completion status of the transaction is reported on the command
5 completion interface.

- 1 14. An interface system suitable for coupling a first bus interface controller with a
2 second bus interface controller, comprising:
3 a first bus interface controller suitable for coupling to a backend device; and
4 a second bus interface controller suitable for coupling to an internal bus of an
5 information handling system, wherein the second bus interface controller
6 is coupled to the first bus interface controller via an interface including
7 a command queuing interface suitable for enqueueing a
8 transaction;
9 a command completion interface suitable for reporting transaction
10 completion; and
11 a data transfer interface suitable for transferring data.
- 1 15. The interface system as described in claim 14, wherein command and control
2 information are suitable for being exchanged on at least one of the command
3 queuing interface and command completion interface while data is exchanged on
4 the data transfer interface.
- 1 16. The interface system as described in claim 14, wherein data for a transaction is
2 suitable for being moved without respect to a current transaction being requested
3 on a control bus.
- 1 17. The interface system as described in claim 14, wherein a backend master device
2 enqueues a transaction on the command queuing interface, at least one transfer
3 of data is accomplished corresponding to the transaction queued on the
4 command queuing interface, and completion status of the transaction is reported
5 on the command completion interface.
- 1 18. The interface system as described in claim 14, wherein a plurality of

2 transactions are queued, the transaction are completed without regard to an
3 order the transactions are queued.

1 19. The interface system as described in claim 14, wherein the first bus interface
2 controller conforms to at least one of a USB standard, SCSI standard, fiber
3 standard and the second bus interface conforms to at least one of a PCI standard
4 and PCI-X standard.

1 20. The interface system as described in claim 14, wherein a plurality of data
2 transfers on the data transfer interface are executed, the plurality of data
3 transfers corresponding to a transaction queued on the command queuing
4 interface.

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